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ABSTRACT

This literature review summarizes the research on early childhood education, parent education, and family support programs, and reports on relevant research in progress. Key findings are discussed in the context of the results of studies over 3 decades. The literature indicates that conceptual underpinnings and theoretical constructs underlying various intervention strategies have evolved over 30 years. The first wave of programs focused on improving the child's cognitive functioning or on training the parents or caregivers as the intervenor by attempting to alter parenting behaviors to promote cognitive functioning, although neither type of program was entirely exclusive. Most programs still consciously address both the child and the parent. The range of expected outcomes has broadened over the years, from a narrowly cognitive focus to a concentration on the entire range of developmental outcomes for the child and to the improvement of life outcomes for the parents. The review of the research also indicates that interventions beginning earlier in the life cycle (i.e., beginning prenatally rather than when the child is near to school entry) are more effective than later interventions, and that comprehensive interventions are complex and have not been studied extensively. The lack of an adequate body of research on collaborative, multifocused, intensive, comprehensive programs is the most serious limitation to date--from the perspective of policymakers seeking evidence in favor of one program strategy over another--and should be pursued. (Contains 185 references.) (DR)

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EVALUATING EDUCATION REFORM: EARLY CHILDHOOD EDUCATION

A Review of Research on Early Education, Family Support and Parent Education, and Collaboration

by

Anne Mitchell, Heather Weiss and Tom Schultz[1]

Over the past three decades an enormous body of research literature has been amassed on early childhood education, and on parent education and family support programs. The literature on collaborations and partnerships relevant to young children and their families, while not nearly so vast, also continues to grow. A search on early education limited to the ERIC database reveals literally hundreds of citations. In addition to completed works, a number of critical studies relevant to policy makers are currently underway across these three areas. This review attempts to summarize these three areas of research as well as to report on relevant research in progress.

Over the past twenty years dozens of literature reviews on early care and education have been written, culminating in the efforts of the National Academy of Sciences. Their publication, *Who Cares for America's Children? Child Care Policy for the 1990s* (Hayes, Palmer and Zaslow, 1990), incorporates a thorough review of all child care research to date. On the broader topic of child and family-focused programs, the National Commission on Children has produced an excellent review of research literature woven throughout its final report, *Beyond Rhetoric: A New American Agenda for Children and Families* (National Commission on Children, 1991). *United We Stand* (Kagan, 1991) offers

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a review of collaboration literature from the education and human service fields as well as a concise history of collaboration in early education and child care.

CHILD CARE AND PREKINDERGARTEN PROGRAMS

From a policy perspective, the term 'early education' is a convenient label for a large category of services encompassing child care, prekindergarten, preschool and early intervention programs.

Review of research on program effects and quality in early intervention, prekindergarten and child care programs

There are basically two bodies of literature that provide information about the quality of early childhood programs, where by quality we mean, the characteristics of a program that contribute to better program outcomes. One is research on program efficacy; the other is research in which studies specifically examine the effects of variation in program characteristics on program outcomes.

Efficacy Studies

Research on the efficacy of early childhood programs can be conveniently divided into short-term and long-term studies, where long-term is defined as having data for more than one or two years beyond the end of the program. There are literally hundreds of studies in the short-term category and relatively few of these have data beyond the end of the program period. While there are only a handful of long-term studies, these tend to be the strongest methodologically and have provided many of the most interesting results. Indeed, for many years the central issue in early childhood was whether positive outcomes are persistent. Now the focus is shifting to research on how lasting positive outcomes are produced and the best approaches to producing such outcomes (Barnett, 1988; Barnett et al., 1988).

Short-term studies. By 1984, as part of a federally funded project, the Early Intervention Research Institute (EIRI; Casto, White, and Barnett, 1985 and 1986) had collected hundreds of reports of research studies on the effects of early childhood programs for

disadvantaged children. Of these, most involved classroom-based programs for three- or four-year-olds that measured short-term outcomes. Additionally, Hubbell (1983) has reviewed over 1,500 studies of the Head Start Project since 1970. With such a large number of relevant studies, a conventional comprehensive literature review is impossible. However, quantitative syntheses or meta-analyses are possible and have been conducted (Hubbell, 1983; White & Casto, 1985; McKey et al., 1985). Although many of the 1,500 Head Start studies annotated by Hubbell followed the children for up to three years after Head Start, the majority measured only immediate effects. The overall findings of the meta-analyses were that children who attended Head Start showed immediate improvement in cognitive ability and school readiness. Given the nature of the data the authors of the Head Start meta-analysis were understandably cautious in drawing conclusions about program quality, but they did tentatively conclude that, at least in the short-run: classroom curriculum did affect cognitive development (more structured programs were better) and achievement motivation (Piagetian-based programs were better), class-size did not have any effects, emphasis on language led to improved achievement motivation, and children of more involved parents appeared to gain more.

The EIRI meta-analysis (Casto & Mastropieri, 1986) dealt with studies of programs serving populations designated as disadvantaged and handicapped. These two groups of studies were analyzed separately, but interestingly, there were few differences in findings between the two groups of studies. Overall, there were educationally meaningful effects of approximately the same magnitudes for disadvantaged and handicapped samples, which held up across handicapping conditions and domains of development. As with the Head Start study only very gross measures of program quality were examined. The most interesting findings were that very intensive parent involvement does not appear to be critical to strong child outcomes, and intensity (the number of hours) of service seems to be positively related to success for children identified as handicapped.

The meta-analyses have been strongly criticized for a variety of problems. The quantitative reviews of Head Start were criticized for including many studies with questionable internal and external validity (Schweinhart & Weikart, 1986; Woodhead,

1988). It was suggested that Head Start attendees would have shown even greater benefits had the reviewers been more selective in including studies. Fortunately, the analyses by White and Casto (1985) and Casto and Mastropieri (1986) reported results according to the quality of the studies. They found that weaker studies consistently produced higher estimates of program effects. This strongly suggests that criticism of the Head Start meta-analysis based on inclusiveness is off-target. However, the more serious criticism is that the measures of program characteristics were poorly constructed. For example, parent involvement is a nebulous term that was essentially defined as training parents as intervenors. Another is that the attention devoted to understanding each study was so small that important nuances are missed and the idiosyncracies of each study are missed. Perhaps most importantly there are apt to be correlations among program characteristics and between program characteristics and the characteristics of the children and families served. The statistical analyses that were performed did not take these into account and so run a very high risk of confounding the effects of program and sample client characteristics.

Long-term studies. Since a major goal of most public early childhood programs is to contribute to the long-term development of children, short-term studies are not entirely satisfactory. They become more satisfactory to the extent that their findings correspond to those of long-term studies. If the immediate effects of short- term studies are found to persist or to be linked to other long-term outcomes of importance, then the short-term studies can be used to guide public policy. To the extent that long-term findings diverge, policy makers and practitioners have to depend more heavily on the results of more expensive and less frequent long-term studies.

The most consistent finding in the longterm studies is that early childhood programs produce immediate gains in cognitive development as measured by IQ tests and in academic ability. There is considerable consistency across studies in this regard. The most significant long-term studies (based on quality of design and length of follow-up) are:

1) Garber and Heber's Milwaukee Project (Garber, 1988; Garber & Heber, 1981)
2) Gray's Early Training Project (Gray, Ramsey, & Klaus, 1984).
3) Honig's Syracuse Family Development Research Program (Lally, Mangione, & Honig, 1987)
4) Herzog's Washington, DC Project (Herzog, Newcomb, & Cisin, 1974)
5) Karnes' Comparative Curriculum Study (Karnes, Schwedel, & Williams, 1983)
6) Miller's Louisville Experiment (Miller & Bizzell, 1983, 1984)
7) Monroe and McDonald's Rome Head Start Study (Monroe & McDonald, 1981)
8) Nieman's Cincinnati Title I Study (Nieman & Gathright, 1981)
9) New York State's Experimental Prekindergarten Program (New York State Education Department, 1982)
10) Philadelphia's Prekindergarten Head Start Evaluation (School District of Philadelphia, 1984)
11) Ramey's Abecedarian Project (Ramey & Campbell, 1987)
12) Weikart's Perry Preschool Project (Berrueta-Clement et al., 1984)

The measures of long-term effects on cognitive development used in these studies are mainly: (1) standardized intelligence tests, and (2) school achievement and placement. Socio-emotional outcomes are not consistently measured in this body of literature, and when they are, they are not comparable to each other nor predictive of behavior (Datta, 1983). Outcomes in other domains were very rarely even considered.

Standardized intelligence tests. Standardized tests of intelligence showed the result of an immediate boost in IQ for children who experienced preschool intervention. This boost ranged from one-third of a standard deviation for the Comparative Curriculum Study (Karnes, et al., 1983) to more than two standard deviations for the Milwaukee Project (Garber, 1988). This range is interesting in that less intensive intervention of half-day preschool for one year resulted in the smaller IQ gains; while the more intensive intervention of full-day intervention almost from birth resulted in the higher IQ gains. Ramey, Bryant, & Suarez (1985) concluded from a review of the experimental long-term

studies (which includes these two) that length and intensity are positively related to IQ gains.

All of the studies with data to age eight found a drop in IQ. Caldwell (1987) has suggested that this neglected period of development--age eight to ten--may need special intervention similar to preschool. In the Milwaukee Project, the experimental children did retain an IQ one standard deviation higher than the control group through age ten, while in the other studies, the two groups' IQs became equivalent.

School Achievement and Placement. The "fade out" of IQ gains was a great disappointment to researchers and to the field in general, yet the experimental groups, in most cases, continued to outperform controls in elementary school on school achievement tests, grade-point average, nonretention in grade, and reduced placement in special education. With these results, the researchers were encouraged to continue looking for differences between the two groups in the area of school success. The data in the area of school achievement through high school are less complete than we would like, as attrition was heavy (more than 50%) for all but three of the studies: the Perry Preschool Study, the Early Training Project, and the Family Development Research Program. The Perry Study found abiding and significant differences in school achievement test scores through age 19 in favor of the experimental group. The results for the Early Training Project and the Family Development Research Program are less clear. Females generally outperformed males on tests of achievement, and females in the experimental groups outperformed all other groups.

More complete data are available for retention in grade and special education placement which can be more easily determined from school records. Interestingly, in most studies, if one of these factors is significant, the other is not, suggesting that school districts tend to deal with most students who are having difficulties by either retaining students or labelling them as handicapped, but not both. The Rome Head Start Study, the Early Training Project, the Perry Preschool Project, the Cincinnati Study, the Philadelphia Evaluation, the New York Prekindergarten Program, and the Abecedarian Project found

reduced placement in special education for the experimentals, while the Karnes and Washington, DC studies found greater retention in grade for the controls. A related measure of number of students who did not drop out of high school also favored children with preschool experience in the Rome Head Start, Early Training, and Perry Preschool studies. Many of these longitudinal studies also investigated students' educational aspirations and expectations (Gray, Ramsey, & Klaus, 1984; Miller & Bizzell, 1984; Karnes, et al., 1983; Berrueta-Clement et al., 1984; Lally, Mangione, & Honig, 1987), and results again favored the children who had attended preschool. Taken together, these measures of scholastic behavior show a consistent beneficial effect on school achievement of participation in preschool programs.

Summarizing the major findings from early educational intervention research, Ramey and Ramey (1992), identify six principles that characterize programs with the strongest effects.

Timing: Interventions that begin earlier and last longer produce greater benefits.

Intensity: Programs that are more intensive in terms of hours per day and days per week produce larger effects than programs that are less intensive.

Directness: Interventions that directly provide children with daily learning experiences produce more positive and lasting results than ones which rely on indirect routes such as parent education only or health services only.

Breadth: Programs providing comprehensive services and using multiple routes to enhance development produce stronger effects than narrowly focused programs.

Individual differences: Children reap different degrees and types of benefits from programs. Greater benefits accrue from programs designed to match the child's learning style and risk conditions.

Environment: Initial effects of interventions will diminish unless supportive changes are made and maintained in children's family, community and school environments.

Studies focusing on quality

As has been shown in the preceding reviews of efficacy studies, a fair amount of confidence can be placed in the effects of early childhood programs in a "laboratory setting," and some corroborating evidence exists for more large-scale settings. However, one major limitation in most of these studies is the implicit assumption that *program* is homogeneous, well-defined and easily replicated. No attempt is made to measure or even describe the program provided in terms of what actually happens in the classroom. Another body of research exists that considers the effect of classroom-level characteristics and the quality of the child's experiences on outcomes.

Initial interest in assessing the effect of various classroom experiences closely followed the original efficacy studies and basically took two paths. The first was a theory-driven "horse race" to prove that a curriculum derived from Theory A was more effective than those derived from Theories B, C, and D. This resulted in a number of curriculum comparison studies in which children were randomly assigned to one of several classrooms using the various curricula (Karnes, Schweidel, & Williams, 1983; Miller & Bizzell, 1983, 1984; Weikart, Epstein, Schweinhart, & Bond, 1978). Other possibly important variables were held constant such as teacher/child ratio, class size, teacher training, and child characteristics. No explainable differences were found among the various curricula's outcomes. Miller found that boys who attended Montessori preschool had a higher IQ. However, there were some methodological problems with this study, including smaller sample size in the Montessori classroom, and differential attrition across gender and curriculum. Also, this finding was not replicated by Karnes. In addition, Schweinhart, Weikart, and Larner (1986) have asserted based on their long- term comparison of school and out-of-school outcomes that direct instruction models in preschool may fail to reduce antisocial behavior and promote prosocial behavior as compared to child-centered approaches. This conclusion has been questioned on methodological grounds, including a relatively high attrition rate which might have affected the results (Gersten, 1986; Bereiter, 1986), but it remains provocative. Moreover, the Schweinhart et al. result suggests that long-term outcomes may not always correspond to short-term outcomes (which favored the direct instruction group).

Research on quality in child care

Another body of early research, seeking to understand whether child care was harmful to children, concluded that it was not per se. As Phillips and Howes put it in their excellent review of child care research, "On the contrary, the overwhelming message was that children in good quality care show no signs of harm, and children from low-income families may actually show improved cognitive development" (Phillips and Howes, 1987).

The next wave of child care research focused on understanding the dimensions of the construct "quality" and representing the diversity of child care settings in which children are placed (as contrasted with the "laboratory settings" of earlier studies. These studies measure classroom experiences through systematic observation and relate those differences in measured experiences to child outcome data. Most noteworthy for its design and comprehensiveness is the National Day Care Study (NDCS)(Ruopp, Travers, Glantz, & Coelen, 1979). In a unique mixture of experimental and quasi-experimental designs, the NDCS found that smaller groups of children and higher teacher/child ratios both resulted in better social and cognitive outcomes for children that seemed to be mediated by more positive interactions between caregivers and children, among children, and between children and materials. These findings have been corroborated by other studies as well. Lower ratios, smaller groups, and better educated teachers are associated with more constructive caregiver behavior and better developmental outcomes for children (e.g., Field, 1980; Vandell & Powers, 1983; Clarke-Stewart & Gruber, 1984; Howes & Rubenstein, 1985; Bruner, 1980; Smith & Connolly, 1981). A recent study commissioned by the California State Legislature experimentally manipulated staff/child ratio from the current standard of 1:8 to either 1:9 or 1:10 in an attempt to discern the effects of the change on program quality (Love, Ryer and Faddis, 1992). They found evidence of declining quality with higher ratios. Increasing ratios increased group size so that children were in larger classes, less involved in activities and less often in small groups.

Staffing and child care program quality. Confirming the findings on staff education and training, many studies have found that formal schooling and specialized training result in more attentive and nurturing behavior by staff (Berk, 1985; Peters & Kostelnick, 1981;

Arnett, 1986; Howes, 1983; Ruopp et al., 1979; Feeney & Chun, 1985; Phyfe-Perkins, 1981). The recent California study found that caregivers with higher levels of early childhood training implemented more developmentally appropriate classrooms (Love, Ryer & Faddis, 1992).

The National Child Care Staffing Study was designed to examine the relationships among child care staff, their working conditions and the quality of center-based child care in the U.S. in 1988. Their findings reveal that the quality of most centers was barely adequate, and that children in lower quality centers with more staff turnover were less competent in language and social development. Despite higher levels of education than the U.S. workforce in general, child care teachers earn very low wages which have actually decreased by over 20% in ten years while staff turnover rates have tripled in ten years. The most important predictor (among the adult work environment variables) of the quality of care children receive was staff wages; higher wages predict higher quality care. Better quality centers were better overall--better environments for children, better educated staff with lower turnover and higher wages (Whitebook, Howes and Phillips, 1989).

A follow-up study conducted in 1992 with the same sample of centers found that staff continued to earn exceptionally low wages overall and that teaching assistants' wages had actually declined since 1988. Turnover also remained high with 70% of the teaching staff interviewed in 1988 having left their jobs by 1992. The overall annual turnover rate had declined slightly to 26% (from 41%), although it is still high compared with rates for all US companies (9.6%) or for public school teachers (5.6%) (Whitebook, Phillips & Howes, 1993).

One of the studies being conducted as part of the new OERI Center on Families, Communities, Schools and Children's Learning may extend somewhat our understanding of what constitutes an effective staff training program. Lynn Kagan will study training programs designed to help low-income mothers become child care workers and will

develop and evaluate a model program with a "two-generational" or strong literacy component.

Program quality and later child development outcomes. Another recent avenue of study has been to develop global ratings of quality and the relationship to later development. These studies combined static variables such as group size, physical environment, and staff training with dynamic variables such as teacher/child interaction, and developed an overall rating for the classroom or center. For the most part, these studies found that attendance at higher quality centers resulted in better social, language, and cognitive outcomes for young children (McCartney, 1984; Phillips, McCartney, & Scarr, 1987; Vandell & Powers, 1983; Vandell, Henderson, & Wilson, 1987; Howes & Olenick, 19[illegible]; Rutter, 1981). In a related but more intricate approach, Holloway and Reichart-Erickson (1988) observed specific teacher-child interaction criteria and found that quality of interaction was related to positive social outcomes for children.

The DOE's Office of Planning, Budget and Evaluation has sponsored a National Observational Study of Early Childhood Programs which focuses on 150 formal settings in five communities across the US. Head Start, school-based and other community-based programs as well as 750 children in Chapter I programs are included. The study investigates relationships between program characteristics and program quality and their impact on child outcomes. The study began in the fall of 1989 and continued through fall of 1992. Final reports should become available later in 1993 (Love, 1991b).

Continuity and transition. The issue of continuity between and among the various programs a child attends over time has been the object of study--most notably in the implementation and evaluation of Project Developmental Continuity, a Head Start Demonstration that ran from 1976 through 1981 (Bond and Rosario, 1982). Smoothing the transition for children moving from preschool into school is still widely believed to be beneficial--helping to sustain the gains made in preschool. A more recent national study of transitions reported findings describing the operational details of transition activities and the extent of coordination between preschool and kindergarten in such

areas as curriculum, information sharing and staff-training. Transition activities were not common, for example only 13% of school had formal policies on transition, and schools which did engage in transition activities usually relied on only a few practices such as school visits by parents of entering students. Greater transition efforts were found to be associated with certain school conditions: 1) administrative leadership; 2) climate of positive attitudes toward children and parents; 3) structural connections between prekindergarten and kindergarten, e.g., co-location; and 4) poverty level with higher levels of poverty associated with higher levels of coordination and communication (Love, 1991a; Love, Logue, Trudeau & Thayer, 1992).

In addition to this study, the U.S. DOE in cooperation with the U.S. DHHS directed the OERI's ten regional educational laboratories to devote effort to promoting preschool-school transition. Five of the labs are further engaged in projects to identify and evaluate exemplary transition programs.[2] Reports on their activities will be available late in 1993. Thirty-two Head Start sites are engaged in a three-year (1991-93) demonstration-evaluation of Head Start-school transition with a national evaluation conducted by the Civitan Center at the U. of Alabama.

Quality in settings other than centers. Family child care, which is used by about 25% of employed mothers, has been the primary object of study in only one large scale national study (Fosburg, 1981). It has only recently been included in studies of early childhood programs as a setting variation (Clarke-Stewart and Gruber, 1984; Goelman and Pence, 1987; among others). Kontos recently completed a comprehensive report compiling what is known about the status of family child care in the U.S. including relevant research (Kontos, 1992). Research on family day care from both the U.S. and Canada is included in *Family Day Care: Current research for Informed Public Policy* (Peters & Pence, 1992). Both volumes conclude that family day care is an important yet seriously under-researched child care environment.

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[2] The five labs are: Research for Better Schools (Philadelphia), South East Regional Vision for Education (Tallahassee), Southwest Education Development Lab (San Antonio), North Central Regional Education Lab (Oakbrook, IL) and Far West Education Lab (San Francisco).

Describing the nature of family child care settings and the quality of children's experiences in these settings is the aim of two new studies. The Family Child Care Quality Studies under the auspices of the Families and Work Institute are investigating how variations in the quality of family child care affect children's development and the effects of training on the quality of family child care settings (Families and Work Institute, 1991a & 1991b; 1992). Final reports from the Study of Children in Family Child Care will be available in January of 1994 and in June of 1994 for the Family Child Care Training Study.

Two Head Start studies in progress will provide information on family child care in Head Start. One is a descriptive study of current family child care programs among Head Start grantees conducted by Pelavin Associates; reports are expected in 1993. The other is a four-year, random assignment, experimental evaluation design whose purpose is to determine the program characteristics of effective Head Start family child care programs and evaluate the effectiveness of delivering Head Start services through family child care. The evaluation is being conducted by RMC Research and CSR from 1992-1996 with interim reports annually and a final report expected in the fall of 1996.

Family-program interactions. Recognizing that family and child care environments are not independent influences on a child's development, recent research focuses on the interactions among features of the child care setting and aspects of the child's family environment such as SES, family structure and maternal satisfaction with employment (e.g., Cochran & Robinson, 1983; Howes & Olenick, 1986; Phillips, McCartney, & Scarr, 1987; Kontos & Feine 1987; Goelman & Pence 1987). The specific effects of child care depend on the quality and type of care, the child's experiences in care and the child's family context. Another study being conducted under the auspices of the OERI Center on Families, Communities, Schools and Children's Learning will likely add to this body of knowledge. Diane Scott-Jones' study of adolescent childbearing will look at the impact of mother's education and child care experience on the education and development of

their children and will describe components of successful child care programs for teen mother's children.

Implications of research for practice

The studies that have directly measured aspects of programs that the field believes are related to quality have yielded some important insights into what constitutes a high-quality program for young children. The long-term research has made a strong contribution to the definition of program quality. The characteristics that these programs shared have come to be associated with high-quality: well-defined curricula, attentive supervision and leadership, inservice training, some form of parent involvement and commitment, and relatively small group size.

However, the studies really do not provide much of a basis for understanding the relative importance of these characteristics. Nor do they tell us much about the effects of their differences. Some have concluded that their differences are probably not very important (Lazar, 1983; Berrueta-Clement et al., 1984). Others have concluded that their differences may be quite important and that apparent interrelationships between program characteristics and child characteristics (such as curriculum and gender) are not likely to be pure coincidence (Powell, 1987). Research has informed the field's standards of quality, but there is a great deal to be learned if ordinary programs are to provide quality experiences to the young children they serve.

The essentials of the agreement on quality reached thus far are captured by the standards set out in the NAEYC statement of developmentally appropriate practice (Bredekamp, 1987) and the related *Accreditation Criteria and Procedures of the National Academy of Early Childhood Programs* (NAECP, 1984). As these standards were developed by representatives of the field, they naturally have broad support among early childhood educators. These standards, representing a unique combination of research evidence and the wisdom of practitioners, have been carefully constructed (Bredekamp, 1986).

The most significant limitations of the completed research are that few studies have taken care to define and measure program implementation and research has generally failed to look beyond short-term outcomes for children to long-term outcomes for children and to outcomes for their parents. We know with some confidence that small class size, high teacher/child ratio, and positive, frequent and nurturant interactions with staff result in better outcomes for young children.

Research on public policy in early education and child care

In some indirect manner, the accumulated evidence from research on program effectiveness and quality has been at least one impetus causing policy makers to act in recent years. Several studies have sought to capture the changing status of early childhood policy and practice during this period.

The Public School Early Childhood Study (PSECS) conducted from 1985-89, was the first national study of public school-based prekindergarten programs. It found that a wide variety types of programs are operated by public schools from Chapter I prekindergartens to Head Start to child care for fee-paying parents. Reports from the study include state-by-state descriptions of all early childhood education and child care programs, findings from a survey of 1225 school districts with prekindergarten programs, and case studies of thirteen public school programs in twelve states (Mitchell, 1988a and 1988b; Marx and Seligson, 1988).

The thirteen case studies yielded the most complete information about program quality and implementation issues. The overall quality of programs varied widely with almost no transfer of good quality practices from prekindergarten into kindergarten. The most glaring lacks were in the area of multicultural materials and activities and attention to children's physical development. The quality of the program was directed related to the expertise of the program's director--not unlike the findings on the role of the principal in effective elementary schools. While the need for comprehensive service was often recognized in program legislation or descriptions, it was rarely realized in practice except within Head Start and a small number of state prekindergarten programs. In sum, public

schools are one provider among many in the increasingly complex early childhood ecosystem. Schools now represent about 5% of the whole delivery system and experience many of the same problems (e.g., staff turnover and low salaries) as other providers in the system (Mitchell, Seligson and Marx, 1989).

Evaluations of state-funded prekindergarten

A number of states have attempted to conduct longitudinal evaluations of their prekindergarten programs (e.g., New York [noted above in the discussion of program efficacy studies], Maryland, Massachusetts, South Carolina, New Jersey, Virginia and others). The story of these efforts illustrates the problems of evaluation design and the tension between funding direct service or research.

South Carolina's prekindergarten program, begun in 1983, was the subject of an evaluation which was to include follow-up on participants using a control/experimental design through the school years. The research design included careful measurement of the quality of program implementation and precise matching of experimental and control groups. The design was cost-effective: data collection involved instruments already in use and the capacities of the state DOE data collection system. Analysis was provided at low-cost (i.e., under $10,000 annually) by researchers from outside the state. The initial results showed great promise (Barnett, et al., 1988). Results reported on outcomes at first grade entry confirmed that measures of the quality of program implementation are critical. If implementation quality had not been known, the conclusion on effects of South Carolina's prekindergarten program would have been that it was not effective. Adequate implementation is necessary to produce academic effects for disadvantaged children (Frede & Barnett, 1992). At present further evaluation is on hold for lack of funds and because an administrative decision was made within the DOE not to fund any out-of-state contracts (Barnett, private communication, 1992). Thus, third grade data from the first wave of the program are on tape but as yet not analyzed.

New Jersey's evaluation of its Urban Prekindergarten Program suffered an even earlier demise. During the first year of the program, a Request For Proposals to conduct a five

year evaluation was circulated. The competition was cancelled for lack of funds a few weeks after the submission deadline for proposals. Currently, the only evaluation being conducted on New Jersey's Urban Prekindergarten Program (for a total cost of under $1500) is the administration of a single test, by Rutgers University graduate students, to a sample of enrolled children (Frede, private communication, 1991).

Maryland's prekindergarten program which began in 1978 has been collecting test scores on participants during their public school careers and now has data well into the high school years. The researchers have generally replicated the findings of other longitudinal studies of the effects of prekindergarten programs--higher reading and math test scores and fewer drop-outs than a matched group of children who did not attend prekindergarten. No findings linking aspects of program quality to outcomes are possible because data on program implementation and modification are not collected. This kind of evaluation design assumes the prekindergarten program is constant, rather than a variable to be measured and correlated with outcomes.

Based more on the positive results of very early studies such as the Perry Preschool than on evaluations of contemporary programs, state-funded prekindergartens have continued to be created. The most rapid development coincided with the peak years of education reform legislation (1983-1988). With the recent addition of Georgia, a total of 35 states now have prekindergarten programs and 14 states contribute funds to Head Start programs in their states. These figures are up from 27 and 12, respectively, in 1989. Prior to 1983 only seven states were involved in funding prekindergarten of any sort.

Expanding on the work of the Public School Early Childhood Study and taking a Head Start perspective, the Education Development Center conducted two studies of state involvement with Head Start, described in reports titled *The Challenge of Coordination* (Goodman & Brady, 1988) and *Lessons Learned* (Brady, 1991). Subsequent semi-annual studies from the Children's Defense Fund (CDF) will continue to update this information and place it in the context of other state early childhood activities. CDF is in the

instrument development phase of a fifty-state survey on prekindergarten programs and well into the data collection phase of a fifty-state survey of subsidized child care, JOBS child care and transitional child care. One of the early reports from these efforts focuses on state investments in early education and child care (Adams & Sandfort, 1992). Other reports will be available from CDF in late 1993.

The Council of Chief State School Officers (CCSSO) has contributed a number of reports on early childhood and family education programs (CCSSO, 1988a; 1988b; 1989a & 1989b). The National Conference of State Legislatures, working to promote the concept that child care and early education ought to be considered simultaneously, produced a legislators' policy guide on early care and education (Gnezda & Smith, 1989).

New information from two linked national studies--the National Child Care Survey and the Profile of Child Care Settings--provides the first detailed picture of the supply and demand for early childhood programs since the Unco study in the early 1970s (Rhodes & Moore, 1975) and updates the supply data from the 1979 National Day Care Study (Ruopp, et al., 1979). These new studies focus on both employed and non-employed mothers, improving upon the data available from Current Population Surveys (which have focused solely on employed mothers). The consumer study, designed and analyzed by the Urban Institute, provides information on child care usage patterns, parent satisfaction, search methods and conceptions of quality for all mothers with a special substudy of low-income households (Hofferth, et al., 1991). The supply study, the Profile of Child Care Settings, conducted by Mathematica Policy Research includes data on the incidence of various forms of child care and operational details such as group size, staffing patterns and turnover (Kisker, et al., 1991). A concise and readable summary of the findings from both studies is available (Willer, et al., 1991). These two studies have enriched our knowledge of the role of all forms of child care in the lives of children.

RESEARCH ON PARENT EDUCATION AND FAMILY SUPPORT PROGRAMS

Recent programs designed to help parents be effective first teachers of their children such as Missouri's New Parents as Teachers, have their roots in a group of programs that

can best be labeled 'family-oriented early childhood intervention programs'. Such programs seek to promote attentive parenting, parent's personal development, healthy child development and children's learning by providing information, assistance, encouragement and sometimes direct services (e.g., good quality child care) to families.

Early Programs 1962 - 1970

The first distinct strand of family-oriented early childhood intervention emerged between 1962 and 1970. Notable research-oriented efforts of the era that worked directly with parents included the Florida Parent Education Program (Gordon, 1967), the Early Training Project (Gray & Klaus, 1968), the Mother-Child Home Program (Levenstein, 1971), and the Ypsilanti-Carnegie Infant Education Project (Lambie, Bond & Weikart, 1974). This group of programs was premised on the notion that maternal socialization and early teaching strategies in low-income black, families failed to prepare their children for school. The programs themselves were a diverse groups. But they generally focused on teaching and demonstrating to low-income mothers how to structure the home environment, talk to and play with their young children in more cognitively stimulating and socially appropriate ways. All worked directly with children to some extent.

All four were envisioned as experiments and employed treatment-control comparisons of some kind, either random assignment (Gordon; Gray & Klaus; Lambie, Bond & Weikart) or assignment by neighborhood (Levenstein). Two of the four programs measured dimensions of parenting: Gray & Klaus found program-favoring effects on the quality of the home environment (using Caldwell and Brady's HOME) and maternal teaching style; Lambie, Bond, & Weikart on the "supportiveness" of maternal verbal behavior with the child.

Perhaps most significant, all four of these programs undertook at least some longitudinal follow-up. The Ypsilanti-Carnegie follow-up (Epstein & Weikart, 1979) found no residual program effects on parent-child interaction or any of a number of child outcomes five years after the program had ended (when children were seven and one-half years old). The investigators concluded that their targeting criterion, social class, was too broad.

Gordon, Gray and Levenstein all participated (along with a number of other investigators) in the Consortium for Longitudinal Studies. Within the Consortium framework all three investigators found evidence of long-term program-favoring effects on children's school careers, as measured by promotion, special education placement, and high school graduation.

Evidence of enduring effects from the Gordon and Gray programs, when placed in the context of the larger group of Consortium studies, suggests that there is more than one path to positive long-term effects for early childhood intervention programs. Programs with different timing and amount of services, educational philosophies, relative focus on parents and children, staffing patterns and so forth can produce enduring effects. What these programs did have in common was a conceptually coherent approach and a high degree of quality control. It also should be noted that even the most parent-focused of the 1960s experimental programs did some measure of direct work with children.

Programs of the 1970s

The first half of the 1970s saw the initiation of two multi-site family-oriented early childhood demonstrations, the Parent Child Development Centers (PCDCs; Andrews, et al., 1982) and the Child and Family Resource Programs (CFRPs; Travers, Nauta, & Irwin, 1982); and a continuing series of local experimental programs, most notably the Yale Child Welfare Research Project (Seitz, Rosenbaum & Apfel, 1985), the Syracuse Family Development Research Program (Lally, Mangione, & Honig, 1987), and the Brookline Early Education Project (Pierson, Walker, & Tivnan, 1984).

Although even more diverse in specifics than the parenting programs of the 1960s, these initiatives shared certain premises. They recognized in their problem formulations, and addressed in their program activities, a wider range of obstacles to healthy parent-child interaction and child development in low-income families than had the experimental programs of the 1960s. They tended to provide a mix of child development-focused intervention, and multi-faceted family support (ranging from health and social services,

to meals, transportation, even adult basic education). Parents' own developmental needs and skills in coping with the chronic stresses associated with poverty were articulated as important program concerns. The focus of their evaluations likewise broadened, most notably to include attributes of parents, and to some extent family functioning.

The PCDCs found significant program-favoring effects on such maternal behaviors as emotional responsiveness, affectionateness, praise, appropriate control, and encouragement of child verbalization (Andrews, et al., 1982). Moderate program-favoring effects on I.Q. at ages 2 and 3 were also found. The CFRP evaluation found significant program-favoring effects on use of community resources, maternal self-reported control of events and general coping, and participation in job training. There were very modest program-favoring effects on parental teaching skills, and no child development effects, for the whole sample or various sub-samples (Travers, Nauta, & Irwin, 1982).

The Family Development Research Program provided an intervention that was comprehensive in focus, timing and direct service: a daily developmental program for children from 6 months to 5 years (full day from 15 to 60 months), weekly parenting-focused home visits prenatally to age 5, nutrition, health and social services as needed. Its operating philosophy, "to support parents rather than to substitute for them" (Lally & Honig, 1977, p. 5), anticipated the shift in program emphases that was to occur during the 1970s.

The main evaluation of the program involved a matched comparison group, constructed when program children were 36 months old (Lally & Honig, 1977). The research team found a program -favoring effect on I.Q. at 36 months that disappeared by 60 months. Program children started school with "more positive" social skills than controls; but by first grade began having more behavioral difficulty than controls, possibly because expectations for individualized attention were not being met (Honig, Lally, & Matheison, 1982). Like the Ypsilanti-Carnegie researchers, the Family Development Program researchers came to feel that targeting was a critical issue. Not all families needed a comprehensive program, but some certainly did: "Some families need minimal supportive

intervention...Other families require more thoroughgoing clinically oriented help" (Lally, Mangione, & Honig, 1987). Unlike the Consortium studies, there were no apparent program effects on retention in grade or special education placement. Program girls seemed to be functioning better academically and socially than control girls. Program boys were found to have lower rates of juvenile delinquency than control boys.

The Yale Child Welfare Research Project (Seitz, Rosenbaum, & Apfel, 1985) provided an individually tailored mix of family support services to 18 families from birth to 30 months of age. Services provided by a highly skilled interdisciplinary team (clinical social worker, nurse pediatrician, psychologist), included parent support and education, pediatric care, day care, developmental examinations, and psychological services. The intervention was designed to focus broadly on family functioning and mothers' personal well-being and development, as well as on the parent-child relationship and child development.

Post-treatment, program children had better language development than controls. In a 10-year follow-up, deliberately attentive to two-generation effects, program boys had less need for remedial services in school than control boys; program children generally had better attendance records than controls. Perhaps most striking, possibly as a result of the skill and breadth of the program's early support, program families were functioning better than controls in a number of spheres. Program mothers reported that they had more pleasurable and involved relationships with their children. All the program families, as opposed to half the control families, were self-supporting, which the researchers hypothesized, was the result of an accumulation of decisions: early participants were more likely to delay subsequent childbearing and later they were more likely to seek additional education.

Influenced by the emerging literature suggesting the developmental importance of the early (0-6) years and convinced that school systems should reallocate their resources accordingly, the public schools of Brookline (Massachusetts) began the Brookline Early Education Project in the early 1970s.

BEEP was open to all parents in the community with newborns and provided three basic kinds of services: a diagnostic program to detect early health or developmental problems, parent education and support through home visits and parent groups, and direct educational services for children through play groups and a pre-kindergarten program. BEEP's evaluation (Pierson, et al., 1983; Pierson, et al., 1984) showed that at kindergarten entry, classroom observations yielded significant differences favoring BEEP children, especially in social skills and use of time. Teacher ratings in second grade indicated that BEEP participation had an effect on parents: participants were more likely to initiate contacts with the teacher concerning the child's progress in school (Pierson, et al., 1983).

Programs of the 1980s

In an effort to better understand how socio-cultural background, transmitted by maternal attitudes and behaviors, affects the development of low-income black children, Slaughter (1985) mounted two different parent education program models with mothers living in Chicago Housing Projects. These were a toy demonstration program delivered by home visitors with social work training and parent discussion groups. The mothers and children in the toy discussion group received twice-a-week home visits during the school year for two years. The discussion group mothers, led by trained social workers, met weekly during the school year and discussed child as well as adult development materials and concerns. Attrition over the first year was high, especially for the discussion group.

In keeping with the trend toward measurement of the effects on maternal-child interaction and maternal development, as well as effects on the child, Slaughter observed behaviors in a maternal teaching situation, assessed child rearing attitudes, and measured aspects of maternal personality development thought to be related to parenting practices. The analyses showed that the discussion group mothers were more likely to organize their thinking about personal and social relationships in a more socially and cognitively complex fashion. They were more open to outsiders, more willing to use external institutions as resources, and more likely to perceive such external groups as personally beneficial. They interacted more with their children and were more likely to expand on

their ongoing play. Both groups of program children had higher average IQ scores at the program's end than the controls. Those whose mothers participated in the discussion group program verbalized more during play.

Slaughter suggests the discussion groups provided a new and culturally consonant social experience for the mothers around their common child rearing tasks and that their increased social understanding of how they could influence the child's development may have promoted their own personal development as well as their behavioral style with their children. Slaughter's study is one of the few that has assessed the effectiveness of discussion group formats for poor mothers (see also Miller, 1988).

Project CARE, a small research and demonstration project for low-income black children from birth and their families, was developed to contrast two different types of programs: intensive educational day care plus family education (provided through bi-weekly home visits and parent workshops) and family education without the day care component. The family education component provided information about child development and included a problem solving curriculum to encourage development of parents' problem-solving skills. Project CARE's evaluation was one of the first to assess a family's stresses and support as well as aspects of the child's cognitive development, maternal knowledge and attitudes, and maternal-child interaction (Ramey, Bryant, Sparling, and Wasik, 1985).

The results of their ongoing evaluation show that at each year through 54 months, the group of children that received day care plus family education were significantly higher on measures of intellectual development (Bryant, personal communication, 1988). At 36 months the mothers of this group reported reduced levels of stressful life events and they perceived they had more supportive daily interactions with others in the community (Ramey, Bryant, Sparling, and Wasik, 1985). The researchers suggest that the lack of positive results for the group receiving only family education raises questions about whether programs that work with parents and do not provide a sustained and intensive program for the children can result in enhanced child development.

The results of another ongoing evaluation, that of the Prenatal and Early Infancy Project (PEIP), however, suggests that a program beginning prenatally and continuing through the early years with bi-weekly home visits can promote enhanced child development, and adult personal development as well. Pregnant women who were poor, unmarried, or teenagers participated in PEIP; two randomly chosen subsets of mothers received home visits through pregnancy and through age two respectively. They were contrasted with a low- and no-treatment control group. The former groups received a personalized and integrated set of services designed to enhance the child rearing context and promote maternal personal development. to these ends, home visitors provided parent education, encouraged family members' and friends' involvement in child care and support of the mother, and linked family members with community health and human services. The nurses encouraged mothers to clarify their own personal plans for continued education and employment, and helped them find the appropriate services to achieve these plans.

The results suggest that a program of *intensive, continuous*, and *individualized* home visits for poor unmarried mothers can promote the use of community services, enhance informal social support and promote positive health habits prenatally (Olds, Henderson, Tatelbaum, and Chamberlin, 1988a). Poor teen mothers who received these visits through infancy were more likely to engage in positive parenting behaviors (e.g., avoidance of restriction and punishment and provision of appropriate play materials) report less infant crying and more positive infant moods, and were less likely to have abused or neglected their children (Olds, et al., 1988b). The follow-up of the participants two years after the intervention ended showed that in comparison with non-visited mothers, the poor unmarried mothers who received home visits returned to school more rapidly after the baby's birth, were employed for more time, felt they had more help with child care and had fewer subsequent pregnancies. Two years after delivery, poor, nurse-visited teen mothers had begun to work as much as the older mothers.

Combining health, family support and early education, the Infant Health and Development Project aimed to reduce the developmental and health problems of low-birthweight premature infants. Intervention families received during the first three years

of the infant's life, regular pediatric follow-up, weekly home visits, bi-monthly parent support groups, and a full-day child development program; control families received only pediatric follow-up. Although no outcomes for parents are reported, results of the randomized, multi-site trial with nearly one thousand families showed that intervention children had significantly higher IQ scores and significantly lower maternally reported behavior problems and no difference in serious health problems. Gains were greater for those children whose families participated more in intervention activities. This study reinforces previous findings favoring comprehensive and intensive interventions (Ramey, et al., 1992; Infant Health and Development Program, 1990)

The federally funded Comprehensive Child Development Program (CCDP), begun in 1989 and continuing through 1994, reflects many of the lessons from these studies. The CCDPs are meant to be *intensive* -- serving children from birth through school entry; *family-focused* -- having a clear set of parent activities and expected outcomes; and *comprehensive* -- providing a range of social, health and educational services to the families involved. A variety of different types of community agencies have been funded; these new programs are being documented and evaluated under a contract with CSR and Abt Associates.

The first year report of the feasibility and process evaluation reveals that during the start-up year meeting families' crisis needs took precedence over attention to long-term goals. Nonetheless, the CCDPs were successfully providing participants with the core services. Health and mental health services were provided though linkages with local providers as were adult education and training. Three-quarters of the CCDPs had difficulty meeting participant families' needs for child care due to underestimation by the CCDPs of the number of families who would need child care, the cost of providing it and the lack of available adequate child care services (Hubbell, et al., 1991). Future reports will document process and feasibility findings annually. The impact evaluation will report effects on children, parents and families from 1989 through 1994 (St. Pierre, 1990).

Summary

This pattern of results suggests the breadth of goals that intensive and continuous family support and education programs may be able to achieve in terms of parenting behaviors and maternal achievement of economic self-sufficiency and the potential utility of programs which balance and promote a mother's personal and maternal development.

Finally, the range of program effects from prenatal health behaviors and enhanced parent-child relationships, to increased economic self-sufficiency, and the prevention of abuse and neglect, indicates the variety of interrelated public policy functions that family support and education programs may be able to fulfill.

The evidence from a selection of the best designed family-oriented early childhood intervention studies of the past 25 years suggests that these programs can produce positive short- and in some cases long-term effects. Most of the long-term evidence relates to more successful school careers for program children, and better social adjustment in school and community. But there is also a growing, albeit still modest, body of data pointing to an improved life course for mothers involved in these programs, and better long-term parent-child relationships. In other words, these programs may be uniquely suited to reach and to alter the likely life course of two generations. Effects on parent and child may even reinforce each other over time (Weiss, 1988b).

The available evidence does provide a foundation for states and communities to move thoughtfully ahead in putting together the programmatic elements of a prenatal through age four family support system. The available evidence supports the notion of using family-oriented early childhood programs in an integrative way to address a number of policy goals for families as a basic social unit, for young adults and for children.

Prenatally through age one or two, it makes sense to focus direct services on parents themselves, and the developing parent-child relationship. Direct services to children during this period reasonably can focus on appropriate primary health care, including developmental and health screening. Parent focused efforts should reflect a balance

between parents' own personal developmental needs and the parent-child relationship. Work with parents to support and strengthen the parent-child relationship is more effective when it is active, with both family workers and parents engaged in demonstrating, modelling, interacting with the infant.

The weight of the evidence suggests that as children approach age two, programs should provide some activities for parents and children together, some specially for parents and some specially for children. In many cases that may mean moving from the home to the center as the locus of program services. As children get older, preschool education for them becomes a critical element of a system of family support services. But it is also important to maintain a family focus, promoting continuity in parent's sense of responsibility for and involvement in their children's development, and providing supports for parents' own efforts at personal development.

It is critical to keep in mind as we build on the approaches reflected in discrete research and development efforts that a common ingredient in effective programs has been careful conceptualization, including attention to the fit among population characteristics, program purposes, and other family support resources in the community; a high degree of quality control in implementation of the intended program; a balance between purposefulness and responsiveness in work with families; and in a number of programs, an internal feedback system that allowed for careful program evolution in response to families' observed and expressed needs.

RESEARCH ON COLLABORATIONS AND PARTNERSHIPS

The thrust of the research literature reviewed so far--on both early care and education and on parent education and family-oriented early interventions--is that more comprehensive approaches are more effective. Comprehensive in this context applies both to conceptualization and to service delivery. As Lee Schorr describes so well in her inspiring book, *Within Our Reach*, successful interventions are comprehensive, flexible and responsive--overcoming fragmentation in services by active collaboration across bureaucratic and professional boundaries (Schorr, 1988). Effective interventions deal with

the whole ecology of the child--as an individual, as part of a family, and part of a neighborhood and community. Achieving the degree of comprehensive services required by families faced with the multiple problems associated with poverty (e.g., poor health, nutrition, housing, inadequate parenting, educational risk) is not usually possible within the confines of one agency--indeed the services themselves cut across health, education and social service agencies in terms of oversight and funding. Both the growing awareness of the multiplicity of problems faced by children and families and the wide range of service providers and funders involved in trying to meet these needs, fuel the current high interest in partnerships and collaborations.

With their landmark reports, *Investing in Our Children* (1985) and *Children in Need* (1987), the Committee for Economic Development (CED) has given voice to the business community's grave concerns with education reform. Both these volumes and their third report *The Unfinished Agenda: A New Vision for Child Development and Education* (1991), call for collaboration to make sense of the currently confusing system of services and supports for families. *The Unfinished Agenda* clearly argues that education reform must reach well beyond the school system and calls for "a comprehensive and coordinated strategy for human investment that redefines education as a process that begins at birth and even before" (CED, 1991).

The latest CED report, *Why Child Care Matters: Preparing Young Children for a More Productive America* (1993), focuses on access and availability of quality child care which CED views as necessary to the development of human resources. A companion report, *Education Before School: Investing in Quality Child Care*, argues that child care should be viewed as an integral part of the nation's educational system (Galinsky & Friedman, 1993). Beyond the call for collaboration and coordination, a consistent message emerges from these and other recent policy reports is that child care *is* education.

Nearly every organization that has undertaken any serious effort in the fields of early care and education and/or parent education and family support in the recent past has ended up recommending more or better collaboration (Committee on Economic

Development, 1985, 1987 and 1991; National Governors' Association, 1987 and 1990; Gnezda & Smith, 1989; Bruner, 1990; Council of Chief State School Officers, 1989a; National Association of State Boards of Education, 1989; Mitchell, Seligson and Marx, 1989). State prekindergarten legislation now routinely calls for collaboration, at least in the planning stage of new initiatives, and often at both state and local levels (Mitchell, Seligson and Marx, 1989; Goodman and Brady, 1988). Many recent federal enactments have heeded the call, requiring collaboration in some form in welfare reform (Family Support Act of 1988), early intervention for children under three (PL 99-457), Head Start State Partnerships (part of the Head Start Reauthorization Act), and the new child care legislation (the Child Care and Child Development Block Grant, 1990). The Even Start program (a part of Chapter I based in large part on Kentucky's Parent and Child Education [PACE]) went beyond requiring collaboration in planning--it is itself a collaborative enterprise among early education, parent education and adult literacy services.

The growing body of literature on collaboration focuses mainly on practical implementation guides for policy makers and treatises arguing the merits of collaboration as a tool for addressing multifaceted problems that cross traditional service delivery and/or funding boundaries. A modest amount of research on the process and effectiveness of collaboration has been undertaken (Mitchell and Halverson, n.d.; Kagan, Rivera and Parker, 1990). Amidst all the clamor, the voices of those with long experience in collaboration caution us to remember that collaboration is not *the* magic answer to the deepening problems of society.

In *Thinking Collaboratively*, Charles Bruner (1991) stresses that collaboration is a means, not the end. It is a tool--an effective strategy to be used to achieve the end of improved and more effective services for children and their families. It is best used to integrate multiple services provided to a family, to ensure that no one "falls through the cracks" (i.e., services are delivered to a needy child/family) and to address problems that affect all families in a particular neighborhood. Collaboration is most effective when it operates at all levels of a system since each reinforces the others. The conceptual model

of collaboration presented operates at four levels of involvement--among administrators of agencies, between line workers in an agency, among line workers across agencies, and between worker and family. He argues that collaborations should be evaluated on the basis of their ability to change the risk factors or problems they set out to affect, not on the mere fact of the collaboration's existence. His analysis of the process of collaboration is helpful to policy maker and practitioner alike.

A compatible, though somewhat different conceptual view of collaboration is presented in *What It Takes: Structuring Interagency Partnerships to Connect Children and Families with Comprehensive Services*. Melaville and Blank point to the failures of the current service delivery system and outline the characteristics of an effective comprehensive service delivery system. Interagency partnerships have the potential to create and sustain such a system. The dynamics and details of the growth and development of collaboration are covered in depth and numerous examples of collaborative efforts in single organizations, communities, and states are highlighted (Melaville and Blank, 1991).

The first study of collaborations in early care and education has produced a number of documents including a review of literature (Kagan, 1991), as well as a report presenting a theoretical framework of collaborations and brief descriptions of over 70 collaborations gathered via document review and phone interviews (Kagan, Rivera and Parker, 1990). More extensive descriptions are provided in case studies of eight early care and education collaborations examining the context, process and outcomes (Kagan, Rivera, Brigham & Rosenblum, 1992). Kagan and her colleagues propose that collaborations occur in three basic forms (termed spoke, ring, or spiral) and that all collaborations pass through six predictable developmental stages. Distinctions are made between service and system collaborations and those that address both which are termed 'dual'. The academic rigor applied to the objects of study and the descriptive nature of the findings of this study make it very useful to other researchers embarking on investigations of collaborations. Because the operational details of collaboration are embedded in the first two volumes, these may be less useful than the case studies document to policy makers looking for

guidance in how to create and use collaborations as a means to improve early care and education.

The National Center for Service Integration (NCSI), established in 1991 by the U.S. DHHS and private foundations, may fulfill policymakers needs for practical assistance. The NCSI is designed to support state and local service integration efforts, defined as administrative and organizational changes aimed at consolidating or coordinating the delivery of health, education and social services, as well as changes in front-line practice, that serve children and families (NCSI, 1992).

SUMMARY

Over the past three decades the conceptual underpinnings and theoretical constructs underlying various intervention strategies have evolved. The first wave of programs focused on the child sought to improve the child's cognitive functioning (i.e., raise IQ into the normal range by the time of school entry) by providing experiences for the child that essentially substituted for the deficient parent. Another approach, used in those early programs focused on the parent, was to train the parent/caregiver as the intervenor by attempting to alter parenting behaviors to promote cognitive functioning of the child and the child's health. In reality, neither type of program was entirely exclusive. In most child-focused programs, the notion that some form of parent involvement was required to reinforce the educational intervention for the child was assumed. Many of the parent-focused programs provided activities for the child either in the home or in a center-based program. The idea that these foci are mutually reinforcing and that perhaps the most effective programs are those that consciously address both the child and the parent is the prevalent view today (Seitz, 1990; Young & Marx, 1992).

Just as the notion of the target of intervention has shifted toward a holistic conception (i.e., the whole family, rather than a choice between parent or child), the range of expected outcomes has tended to broaden as well. The narrowly cognitive focus of early programs gradually gave way to attention to the entire range of developmental outcomes for the child (i.e., social and emotional well-being as well as cognitive functioning and

physical health) and to the improvement of life outcomes for the parents. Certainly, the quality of the parent-child relationship--the ability to be warm and nurturing--has strong effects on the social and emotional well-being of a child and probably affects cognitive functioning as well.

The evidence is fairly clear that interventions beginning earlier in the lifecycle are more effective, i.e., beginning prenatally rather than when the child is near to school entry. Those that are more intense in the sense of providing services for a longer period of time rather than for one or two years appear to generate stronger effects. The complexity of delivering a program that focuses simultaneously on child, parent and family; that begins before birth and carries on until the child is well into elementary school; and that is designed to affect all developmental domains is great. Partnership, collaboration and creativity are clearly required and, judging from the growing body of writing on the topic, are generating program strategies that will, in turn, generate research. The lack of an adequate body of research on these collaborative, multifocused, intensive, comprehensive programs is the most serious limitation of the literature to date, from the perspective of policy makers seeking evidence in favor of one program strategy over another. While the research literature is yet to be written on these kinds of comprehensive, holistic, family focused programs, they are clearly the wave of the future and should be a central target of future research.

References and Bibliography

Adams, G. & Sandfort, J. R. (1992). State investments in early education and child care. Washington, DC: Children's Defense Fund.

Advisory Panel for the Head Start Evaluation Design Project (1990, September). Head Start research and evaluation: A blueprint for the future. Washington, DC: Office of Human Development Services, Department of Health and Human Services, with Collins Management Consulting, Inc.

Andrews, S., Blumenthal, J., Johnson, D., Kahn, A. Ferguson, C. Laster, T. Malone, P & Wallace, D. (1982). The skills of mothering: A study of Parent Child Development Centers. Monographs of the Society for Research in Child Development, 47, (6).

Arnett, J. (1986). Caregivers in day care settings. Does training matter? Unpublished doctoral dissertation, University of Virginia.

Barnett, W.S. (1985a). Benefit-cost analysis of the Perry Preschool Program and its long-term Effects. Educational Evaluation and Policy Analysis, 7, 333-342.

Barnett, W.S. (1985b). The Perry Preschool program and its long-term effects: A benefit-cost analysis. High/Scope Early Childhood Policy Papers (No. 2). Ypsilanti, MI: High/Scope.

Barnett, W.S. (1986). Methodological issues in economic evaluation of early intervention programs. Early Childhood Research Quarterly, 1(3), 249-268.

Barnett, W.S. (1988). Forging preschool education policy: An economic perspective. Paper presented at the National Conference on Early Childhood Issues: Policy Options in Support of Children and Families, Washington, DC.

Barnett, W.S., & Escobar, C.M. (1987a). Research on the cost-effectiveness of early educational intervention: Implications for policy, practice, and research. Journal of Community Psychology.

Barnett, W.S., & Escobar, C.M. (1987b). The economics of early educational intervention: A review. Review of Educational Research, 57(4), 387-414.

Barnett, W.S., Frede, E.C., Mobasher, H., & Mohr, P. (1988). The efficacy of public preschool programs and the relationship of program quality to efficacy. Educational Evaluation and Policy Analysis, 10(1), 37-49.

Bereiter, C. (1986). Does direct instruction cause delinquency? Early Childhood Research Quarterly, 1(3), 289-292.

Berk, L. (1985). Relationship of educational attainment, child-oriented attitudes, job satisfaction and career commitment to caregiver behavior toward children. Child Care Quarterly, 14, 103-129.

Berrueta-Clement, J.R., Schweinhart, L.J., Barnett, W.S., Epstein, A.S., & Weikart, D.P. (1984). Changed lives: The effects of the Perry Preschool program on youths through age 19. Ypsilanti, MI: High/Schop Press.

Biennial Implementation Task Force (1990). Putting it together for kids: A handbook for developing integrated services for children and their families. Washington, DC: Child Welfare League of America.

Bond, J. T. and Rosario, J (1982). Project Developmental Continuity evaluation: Final report executive summary. Ypsilanti, MI: High/Scope Educational Research Foundation.

Both, D. R. & Garguque, L. (Eds.) (1989). Social policy for children and families: Creating an agenda. Washington, DC: National Academy Press.

Brady, J. P. (1991). Lessons Learned. Newton, MA: Education Development Center.

Bredekamp, S. (1986). The reliability and validity of the early childhood classroom observation scale for accrediting early childhood programs. Early Childhood Research Quarterly, 1(2), 103-108.

Bredekamp, S. (Ed.) (1987). Developmentally appropriate practice in early childhood programs serving children from birth through age 8, expanded edition. Washington, DC: National Association for the Education of Young Children.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. Developmental Psychology, 22, 723-742.

Brooks-Gunn, J. (1990). Promoting healthy development in young children: What educational interventions work? NY: National Center for Children in Poverty.

Bruner, C. (1991). Thinking collaboratively: Ten questions and answers to help policy makers improve children's services. Washington, DC: Education and Human Services Consortium.

Bruner, C. (1990). State-level approaches to foster local-level collaboration : Iowa's initiatives to improve children's welfare (draft). Denver, CO: National Conference of State Legislatures.

Bruner, J. (1980). Under five in Britain. Ypsilanti, MI: High/Scope.

Caldwell, B.M., & Bradley, R. (1984). Home observation for measurement of the environment. Revised Edition. Little Rock, AR: University of Arkansas at Little Rock.

Caldwell, B.M. (1987). Sustaining intervention effects: Putting malleability to the test. In J.J. Gallagher & C.T. Ramey (eds.), The malleability of children. Baltimore, MD: Brookes.

Casto, G. & Mastropieri, M.A. (1986). The efficacy of early childhood programs: A meta-analysis. Exceptional Children, 5, 417-424.

Casto, G., White, K.R., & Barnett, W.S. (1986). Final report of the Early Intervention Research Institute (Report to the U.S. Department of Education). Logan, UT: Utah State University.

Casto, G., White, K.R., & Barnett, W.S. (1985). Early Intervention Research Institute: Annual Report (Contract #300-82-0367). Logan: Utah State University, Developmental Center for Handicapped Persons, Early Intervention Research Institute.

Center for Public Advocacy Research (1987). A study of program models and strategies designed to improve coordination between early childhood education and day care in New York State. In New York State Council on Children and Families, Early childhood services in New York State: A study of preschool and day care activities. Albany, NY New York State Council on Children and Families.

Clarke-Stewart, A., & Gruber, C. (1984). Day care forms and features. In R.C. Ainslie (Ed.), Quality variations in day care. New York: Praeger.

Cochran, M.M., & Robinson, J. (1983). Day care, family circumstances and sex differences in children. In S. Kilmer (Ed.), Advances in early education and day care (Vol. 3, pp. 46-47). Greenwich, CT: JAI Press.

Committee for Economic Development (1993). Why Child Care Matters: Preparing Young Children for a More Productive America. New York: Author.

Committee for Economic Development (1991). The unfinished agenda: A new vision for child development and education. New York: Author.

Committee for Economic Development (1987). Children in need: Investment strategies for the educationally disadvantaged. New York: Author.

Committee for Economic Development. (1985). Investing in our children: Business and the public schools. New York: CED.

Council of Chief State School Officers (1990). Early childhood and family education. Orlando, FL Harcourt Brace Jovanovich, Publishers.

Council of Chief State School Officers (1989a). Success for all in a new century. Washington, DC: Author.

Council of Chief State School Officers (1989b). Family support, education and involvement: A guide for state action. Washington, DC: Author.

Council of Chief State School Officers (1988a). A guide for state action: Early childhood and family education. Washington, DC: Author.

Council of Chief State School Officers (1988b). State profiles: Early childhood & parent education and related services. Washington, DC: Author.

Crose, C. & Kyle, J.E., (Eds.) (1991). Ways and means for children and families. Washington, DC: National League of Cities.

Datta, L. (1983). Epilogue: We never promised you a rose garden, but one may have grown anyhow. In Consortium for Longitudinal Studies (Ed.), As the twig is bent...lasting effects of preschool programs (pp. 467-479). Hillsdale, NJ: Earlbaum Associates.

Education and Human Services Consortium (1989). New Partnerships: Education's Stake in the Family Support Act of 1988. Washington, DC: Author.

Elmore, R. F. and Fuhrman, S. H. (1990). Understanding local control in the wake of state education reform. Educational Analysis and Policy Evaluation 12 (1), 82-96.

Entwisle, D.R., and Hayduk, L.A. (1982). Early schooling: Cognitive and affective outcomes. Baltimore: The Johns Hopkins University Press.

Epstein, A. & Weikart, D. (1979). The Ypsilanti-Carnegie Infant Education Project: Longitudinal follow-up. Ypsilanti: High/Scope.

Families and Work Institute (1991a). The Study of Children in Family Child Care: Summary. New York: Author.

Families and Work Institute (1991b). The Family Child Care Training Study: Summary. New York: Author.

Families and Work Institute (1992). Memorandum to funders and advisors of the Study of Children in Family Child Care and the Family Child Care Training Study. New York: Author.

Field, T. (1980). Preschool play: Effects of teacher:child ratio and organization of classroom space. Child Study Journal, 10, 191-205.

Feeney, S., & Chun, R. (1985). Effective teachers of young children. Young Children, 47-52.

Fosburg, S. (1981). Family Day Care in the United States: Summary of Findings of the National Day Care Home Study. Washington, DC: U. S. Department of Health and

Human Services.

Frede, E., & Barnett, W. S. (1986). Developmentally Appropriate Public School Preschool: A Study of Implementation of the High/Scope Curriculum and Its Effects on Disadvantaged Children's Skills at First Grade. Early Childhood Research Quarterly, 7, 483-499.

Fromberg, D., & Williams, L. (1992). Encyclopedia of early childhood education. New York: Garland Press.

Galinsky, E., & Friedman, D. (1993). Education before school: Investing in quality child care. New York: Scholastic Books.

Garber, H.L. (1988). The Milwaukee project. Washington, DC: American Association on Mental Retardation.

Garber, H.L., & Heber R. (1981). The efficacy of early intervention with family rehabilitation. In M. J. Begab, H.C. Haywood, & H.L. Garber (eds.), Psychosocial influences in retarded performance: Vol. II. Strategies for improving competence (pp. 71-99). Baltimore, MD: University Park Press.

Gersten, R. (1986). Response to "Consequences of three preschool curriculum models through age 15". Early Childhood Research Quarterly, 1(3), 293-302.

Gnezda, M.T. & Smith, S.L. (1989). Child care and early childhood education policy: A legislator's guide. Denver, CO: National Conference of State Legislatures.

Goodman, I.F. & Brady, J.P. (1988). The challenge of coordination: Head Start's relationship to state-funded preschool initiatives. Newton, MA: Education Development Center, Inc.

Goelman, H., & Pence, A. (1987). Some aspects of the relationships between family structure and child Language development in three types of day care. In D. Peters & S. Kontos (Eds.), Annual advances in applied developmental psychology, (2), 129-146). Norwood, NJ: Ablex.

Gordon, I. (1967). A parent education approach to provision of early stimulation for the culturally disadvantaged. Final report to the Ford Foundation Fund for the Advancement of Education. Gainsville, FL: Institute for Developmental Studies, University of Florida.

Gray, S.W., Ramsey, B.K., & Klaus, R.A. (1984). From 3 to 20: The early training project. Baltimore, MD: University Park Press.

Gray, S. & Klaus, R. (1968). The early training project. Monographs of the Society for Research in Child Development, No. 33.

Grubb, N. & Lazerson, M. (1982). Broken promises. New York: Basic Books.

Hayes, C.D., Palmer, J.L. & Zaslow, M.J. (Eds.) (1990). Who cares for America's children? Child care policy for the 1990s. Washington, DC: National Academy Press.

Herzog, E., Newcomb, C.H., & Cisin, I.H. (1974). Double deprivation: The less they have, the less they learn. In S. Ryan (Ed.), A report of the longitudinal evaluations of preschool programs (Vol. I, Publication No. OHD 75-25). Washington, DC: U.S. Department of Health, Education, and Welfare.

Hodgkinson, H.L. (1989). The same client: The demographsics of education and service delivery systems. Washington, DC: Institute for Educational Leadership.

Hofferth, S. L., Brayfield, A., Deich, S., & Holcomb, P. (1991). National Child care Survey, 1990. Washington, DC: The Urban Institute.

Holloway, S.D., & Reichart-Erickson, M. (1988). The relationship of day care quality to children's free play behavior and social problem-solving skills. Early Childhood Research Quarterly, 3(1), 39-54.

Howes, C. (1983). Caregiver behavior in center and family day care. Journal of Applied Developmental Psychology, 4, 99-107.

Howes, C. (1986). Keeping current in child care research: An annotated bibliography. Washington, DC: National Association for the Education of Young Children.

Howes, C. & Olenick, M. (1986). Family and child care influences on toddlers' compliance. Child Development, 57, 202-216.

Howes, C. & Rubenstein, J. (1985). Determinants of toddlers' experience in daycare: Age of entry and quality of setting. Child Care Quarterly, 14, 140-151.

Hubbell, R. (1983). Head Start evaluation, synthesis, and utilization project (DHHS Publication No. OHDS 83-31184). Washington, DC: U.S. Government Printing Office.

Hubbell, R., Cohen, E., Halpern, P., DeSantis, J., Chaboudy, P., Titus, D., DeWolfe, J., Kelly, T., Novotney, L., Newbern, L., Baker, D., & Stec, R. (1991). Comprehensive Child Development Program -- a national family support demonstration: First annual report. Washington, DC: CSR, Inc.

Infant Health and Development Program (1990). Enhancing the outcomes of low-birth-wieght infants. Journal of the American Medical Association, 263 (22): 3035-3042.

Irvine, D.J. (1979). Parent involvement affects children's cognitive growth. Albany, NY: New York State Education Department.

Kagan, S. L. (1991). United we stand: Collaboration for child care and early education

services. New York: Teachers College Press.

Kagan, S. L., Rivera, A. M., and Parker F. L. (1990). Collaborations in action: Reshaping services for young children and their families. New Haven, CT: Yale University Bush Center in Child Development and Social Policy.

Kagan, S.L., Rivera, A. M., Brigham, N., & Rosenblum, S. (1992). Collaboration: The Cornerstone of an Early Childhood System. New Haven: The Bush Center in Child Development and Social Policy.

Karnes, M.B., Schweidel, A.M., & Williams, M.B. (1983). A comparison of five approaches for educating young children from low-income homes. In Consortium for Longitudinal Studies,As the twig is bent..lasting effects of preschool programs (pp. 133-170). Hillsdale, NJ: Earlbaum Associates.

Kilmer, S., (Ed.) (1980-86). Advances in early education and day care: A research annual, Vol. 1-4. Greenwich, CT: JAI Press.

Kisker, E. E., Hofferth, S. L., Phillips, D.A., & Farquhar, E. (1991). A Profile of child care settings: Early education and care in 1990. Princeton, NJ: Mathematica Policy Research.

Kontos, S. (1992). Family day care: Out of the shadows and into the limelight. Washington, DC: National Association for the Education of Young Children.

Kontos, S. & Fiene, R. (1987). Child care quality, compliance with regulations, and children's development: The Pennsylvania Study. In D.A. Phillips (Ed.), Quality in child care: What does the research tell us? Washington, DC: National Association for the Education of Young Children.

Kurz-Riemer, K. (1981). A study of policy issues related to early childhood and family

education in Minnesota: A report to the Minnesota legislature. St. Paul, MN: Minnesota Council on Quality Education.

Kyle, J.E. (Ed.) (1987). Children, families and cities: Programs that work at the local level. Washington, DC: National League of Cities.

Lally, R., Mangione, P., & Honig, A. (1987). Long-range impact of an early intervention with low-income children and their families. San Francisco: Far West Laboratories.

Lally, R. & Honig, A. (1977). The Family Development Research Program: A program for prenatal, infant, and early childhood enrichment. Final Report to the Office of Child Development, H.E.W. Syracuse University.

Lambie, D. Bond, J.T., & Weikart, D. (1974). Home teaching with mothers and infants. Ypsilanti: High/Scope.

Larsen, J.M. & Robinson, C.C. (1989). Later effects of preschool on low-risk kids. Early Childhood Research Quarterly, 4(1): 133-144.

Lazar, I. & Darlington, R. (1982). Lasting effects of early education: A report from the Consortium for Logitudinal Studies. Monographs of the Society for Research in Child Development, 47(2 & 3).

Lazar, I. (1983). Discussion and implications of the findings. In Consortium for Longitudinal Studies (Ed.), As the twig is bent...lasting effects of preschool (pp. 461-466). Hillsdale, NJ: Earlbaum Associates.

Levenstein, P. (1971). Verbal interaction project: Aiding cognitive growth in disadvantaged preschoolers through the mother-child home program. Final Report. New York: Family Service Association of Nassau County.

Levy, J.E. with Copple, C. (1989). Joining forces: A report from the first year. Alexandria, VA: National Association of State Boards of Education.

Love, J. M. (1991a). National study of preschool-to-school transitions: Summary. Hampton, NH: RMC Research Corporation.

Love, J. (1991b). Observations of preschool education and care for disadvantaged children: Study abstract. Hampton, NH: RMC Research.

Love, J.M., Logue, M.E., Trudeau, J.V., & Thayer, K. (1992). Transitions to kindergarten in American schools. Portsmouth, NH: RMC Research.

Love, J.M., Ryer, P., & Faddis, B. (1992). Caring environments: Program quality in California's publicly funded Child Development Programs. Portsmouth, NH: RMC Research.

McCartney, K. (1984). The effect of quality day care environment upon children's language development. Developmental Psychology, 20, 244-260.

McKey, R.H., Condelli, L., Ganson, H., Barrett, B., McConkey, C., & Plantz, M. (1985). The impact of Head Start on children, families, and communities (Final report of the Head Start Evaluation, Synthesis, and Utilization Project). Washington, DC: CSR.

Marx, F. & Seligson, M. (1988). The Public School Early Childhood Study: The state survey.

Melaville, A.I. with Blank, M.J. (1991). What it takes: Structuring interagency partnerships to connect children and families with comprehensive services. Washington, DC: Education and Human Services Consortium.

Miller, S. (1988). The Child Welfare League of America's Adolescent Parenting Project.

In H. Weiss & F. Jacobs (Eds.), Evaluating Family Programs. Hawthorne, NY: Aldine De Guyter.

Miller, L.B., & Bizzell, R.P. (1984). Long-term effects of four preschool programs: Ninth and tenth grade results. Child Development, 55, 1570-1587.

Miller, L.B., & Bizzell, R.P. (1983). The Louisville Experiment: A comparison of four programs. In Consortium for Longitudinal Studies, As the twig is bent...lasting effects of preschool programs, pp. 171-200.

Mitchell, A.W. (1989, May). Old baggage, new visions: Shaping policy for early childhood programs. Phi Delta Kappan, pp. 665-672.

Mitchell, A.W. & Modigliani, K. (1989, September). Young children in public schools. Young Children, 44(6): 56-61.

Mitchell, A.W., Seligson, M., & Marx, F. (1989). Early childhood programs and the public schools: Between promise and practice. Westport CT: Auburn House/Greenwood Press.

Mitchell, A.W. (1988a). The Public School Early Childhood Study: The case studies. NY: Bank Street College of Education.

Mitchell, A.W. (1988b). The Public School Early Childhood Study: The district survey. NY: Bank Street College of Education.

Mitchell, A.W. (1987). Serving children and families: Local models of coordination in early childhood programs. In New York State Council on Children and Families, Early childhood services in New York State, Vol 2. New York: New York State Council on Children and Families.

Mitchell, C. & Halverson, B. (N.D.). The School-CBO Collaboration Study. NY: Bank Street College of Education.

Monroe, E., & McDonald, M.S. (1981). Follow-up study for the 1966 Head Start program. Rome City Schools, Rome, Georgia. Unpublished paper cited by Hubbell (1983).

National Academy of Early Childhood Programs (1984, revised 1989). Accreditation criteria and procedures of the National Academy of Early Childhood Programs. Washington, DC: National Association for the Education of Young Children.

National Assembly (1991). The community collaboration manual. Washington, DC: Author.

National Association of State Boards of Education (1989). Right from the Start. Alexandria, VA: Author.

National Black Child Development Institute. Safeguards: Guidelines for establishing child development programs for four-year-olds in the public schools. Washington, DC: Author.

National Center for Service Integration (1992). Information about the Clearinghouse. New York: National Center for Children in Poverty.

National Commission on Children (1991). Beyond rhetoric: A new American agenda for children and families. Washington, DC: Author.

National Governor's Assocation (1990). Educating America: State strategies for achieving the national education goals. Report of the Task Force on Education. Washington, DC: Author.

National Governors' Association (1987). The first sixty months: The next steps. Washington, DC: Author.

National Governors' Association (1986). Time for results: The governor's 1991 report on education. Washington, DC: National Governor's Association Center for Policy Research and Analysis.

National Health/Education Consortium (1990). Crossing the boundaries between health and education. Washington, DC: National Commission to Prevent Infant Mortality and Institute for Educational Leadership.

New York State Education Department (1982). Evaluation of the New York State Experimental prekindergarten program (final report). (ERIC Document Reproduction Service No. ED 219 123)

Nieman, R.H., & Gathright, J.F. (1981). The long-term effects of ESEA Title I preschool and all-day kindergarten: An eight-year follow-up. Cincinnati, OH: Cincinnati Public Schools.

Olds, D.L., Henderson, C.R., Tatelbaum, R., & Chamberlin, R. (1988a). Improving the delivery of prenatal care and the outcomes of pregnancy: A randomized trial nurse home visitation. Pediatrics, 77, 16-28.

Olds, D.L., Henderson, C.R., Tatelbaum, R., & Chamberlin, R. (1988b). Improving the lifecourse development of socially disadvantaged mothers: A randomized trial nurse home visitation. American Journal of Public Health, 78, 1436-1445.

Pelavin Associates, Inc. (1992). Descriptive study of Head Start family child care homes: Abstract. Washington, DC: Author.

Peters, D.L., & Kostelnick, M.J. (1981). Current research in day care personnel

preparation. In S. Kilmer (Ed.), Advances in early education and day care (Vol. 2). Greenwich, CT: JAI Press.

Peters, D. L., & Pence, A.R. (Eds.) (1992). Family day care: Current research for informed public policy. New York: Teachers College Press.

Pierson, D., Walker, T., & Tivnan (1984). A school-based program from infnacy to kindergarten for children and their parents. The Personnel and Guidance Journal, 62(8): 448-455.

Pierson, Bronson, Dromey, Swartz, Tivnan, & Walker (1983). The impact of early education: Measured by classroom observations and teacher ratings of children in kindergarten. Evaluation Review, 7(2): 191-216.

Phillips, D. A., McCartney, K., & Scarr, S. (1987). Child care quality and children's social development. Developmental Psychology, 23, (4), 537-543.

Phillips, D. A. & Howes, C. (1987). Indicators of quality child care: Review of research. In D. A. Phillips (Ed.), Quality in child care: What does research tell us? Washington, National Association of the Education of Young Children.

Phyfe-Perkins, E. (1981). Effects of teacher behavior on preschool children: Review of research. Washington, DC: National Institute of Education. (ERIC Document Reproduction Service No. ED 211 176)

Powell, D.R. (1987). Comparing preschool curricula and practices: The state of research. In S. L. Kagan & E.F. Zigler (eds.), Early schooling: The national debate (pp. 190-211). New Haven, CT: Yale University Press.

Ramey, C.T., Bryant, D.M., Sparling, J.J., & Wasik, B.H. (1985). Project CARE: A comparison of two early intervention strategies to prevent retarded development. Topics

in Early Childhood Special Education, 5(2): 12-25.

Ramey, C.T., Bryant, D.M., & Suarez, T.M. (1985). Preschool compensatory education and the modifiability of intelligence: A critical review. In D. Detterman (Ed.), Current topics in human intelligence. Norwood, NJ: Ablex Publishing Company.

Ramey, C.T., Bryant, D.M., Wasik, B.H., Sparling, J.J., Fendt, K.H., LaVange, L. (1992). The Infant Health and Development Program for Low Birthweight Infants: Program elements, family participation, and child intelligence. Pediatrics.

Ramey, C.T., & Campbell, F.A. (1987). The Carolina Abecedarian project: An educational experiment concerning human malleability. In J.J. Gallagher & C.T. Ramey (eds.), The malleability of children. Baltimore, MD: Brookes.

Ramey, S.L., & Ramey, C.T., (1992). Early educational intervention with disadvantaged children--To what effect? Applied and preventive psychology.

Rhodes, T. and Moore, J. (1975). National child care consumer study: 1975, Vol. I. Arlington, VA: Unco.

Rodriquez, E., McQuaid, P. & Rosauer, R. (1988, February). Community of purpose: Promoting collaboration through state action. Denver, CO: Education Commission of the States.

Ruopp, R., Travers, J., Glantz, F., & Coelen, C. (1979). Children at the center: Summary findings and their implications. Final report of the National Day Care Study, Vol. I. Cambridge, MA: Abt Associations.

Rutter, M. (1981). Social-emotional consequences of day care for preschool children. American Journal of Orthopsychiatry, 51(1), 4-27.

Scheffler, H.N. (1985). Resources for early childhood: An annotated bibliography and guide for educators, librarians, health care professionals, and parents. New York: Garland.

School District of Philadelphia (1984). Evaluation of the prekindergarten Head Start program (Report No. 8435). Philadelphia: Author.

Schorr, L. with Schorr, D. (1988). Within our reach: Breaking the cycle of disadvantage. New York: Anchor Books.

Schweinhart, L.J., & Weikart, D.P (1986, January). What do we know so far? A review of the Head Start Synthesis Project. Young Children , pp. 49-55. Washington, DC: National Association for the Education of Young Children.

Schweinhart, L.J., Weikart, D.P., & Larner, M.B. (1986). Consequences of three preschool curriculum models through age 15. Early Childhood Research Quarterly, 1, 15-46.

Seitz, V. (1990). Intervention programs for impoverished children: A comparison of educational and family support models. In Annals of Child Development, 7, 73-103. London: Jessica Kingsley Publishers, Ltd.

Seitz, V., Rosenbaum, L., & Apfel, N. (1985). Effects of family support intervention: A ten year follow-up. Child Development, Vol. 56: 376-391.

Seppanen, P. S. and Heifetz, J. (1988). Community Education as a home for family support and education programs. Cambridge, MA: Harvard Family Research Project.

Slaughter, D. (1983). Early intervention and its effects on maternal and child development. Monographs of the Society for Research in Child Development, 48(4).

Smith, P., & Connolly, K. (1981). The behavioral ecology of the preschool. Cambridge, England: Cambridge University Press.

St. Pierre, R., Schwartz, J., Nickse, R. & Goodson, B. (1990). National Even Start evaluation overview. Submitted to the Office of Planning, Budget and Evaluation, U.S. Department of Education. Cambridge, MA: Abt Associates.

Travers, J., Nauta, M., & Irwin, N. (1982). The efffects of a social program: Final report of the Child and Family Resource Program's infant-toddler component. Cambridge, MA: Abt Associates.

Treanor, W. (1988). Barriers to developing comprehensive and effective youth services. Washington, DC: William T. Grant Foundation Commission on Work, Family and Citizenship.

U.S. General Accounting Office (1990). Early childhood education: What are the costs of high-quality programs? Washington, DC: Author.

U.S. General Accounting Office (1989). Early childhood education: Information on costs and services at high quality centers. Washington, DC: Author.

Vandell, D., and Powers, C. (1983). Day care quality and children's free play activities. American Journal of Orthopsychiatry, 53, 293-300.

Vandell, D.L., Henderson, K., & Wilson, K.S. (1987). A follow-up study of children in excellent, moderate, and poor quality care. Unpublished manuscript, University of Texas at Dallas.

Washington, V. & Oyemade, U.J. (1987). Project Head Start: Past, present, and future trends in the context of family needs. New York: Garland.

Weikart, D.P., Epstein, A.S., Schweinhart, L.J., & Bond, J.T. (1978). The Ypsilanti preschool curriculum demonstration project: Preschool years and longitudinal results. Monographs of the High/Scope Educational Research Foundation, 4. Ypsilanti, MI: High/Scope Educational Research Foundation.

Weiss, H. (1991). Innovative models to guide family support and education policy in the 1990s: An analysis of four pioneering state programs (Connecticut, Maryland, Missouri and Minnesota). Cambridge, MA: Harvard Family Research Project.

Weiss, H. (1991). Raising our future: Families, schools and communities joining together. Cambridge, MA: Harvard Family Research Project.

Weiss, H. (1989). From grass roots programs to state policy: Strategic planning and choices for family support and education initiatives. Cambridge, MA: Harvard Family Research Project.

Weiss, H. (1988a). Family support and education programs and the public schools: Opportunities and challenges. Cambridge, MA: Harvard Family Research Project.

Weiss, H.B. (1988b). Family support and education programs: Working through ecological theories of human development. In Weiss, H.B. & Jacobs, F. (Eds.), Evaluating Family Programs. Hawthorne, NY: Aldine De Gruyter.

Weiss, H and Halpern, R. (1989). The challenges of evaluating state family support and education initiatives: An evaluation framework. Cambridge, MA: Harvard Family Research Project.

Weiss, H.B. & Halpern, R. (1988). Community-based family support and education programs: Something old or something new? Paper prepared for National Resource Center for Children in Poverty. New York: Columbia University.

Weiss, H.B. & Jacobs, F.H. (Eds.) (1988). Evaluating family programs. New York: Aldine De Gruyter.

White, K., et al. (1987). Annual report of the longitudinal studies of the effects and costs of early intervention for handicapped children (Report to the U.S. Department of Education). Logan: Utah State University.

White, K.R., Bush, D., & Casto, G. (1985). Learning from reviews of early intervention. The Journal of Special Education, 19(4), 417-428.

White, K.R., & Casto, G. (1985). An integrative review of early intervention efficacy studies with at-risk children: Implications for the handicapped. Analysis and Intervention in Developmental Disabilities, 5, 7-31.

Whitebook, M., Howes, C. and Phillips, D. A. (1989). Who cares? Child care teachers and the quality of care in America. Oakland CA: Child Care Employee Project.

Whitebook, M., Phillips, D. A., & Howes, C. (1993). National Child Care Staffing Study revisited: Four years in the life of center-based child care. Oakland CA: Child Care Employee Project.

Willer, B., Hofferth, S.L., Kisker, E.E., Divine-Hawkins, P., Farquhar, E., Glantz, F.B. (1991). The demand and supply of child care in 1990: Joint findings from the National Child Care Survey 1990 and a Profile of Child Care Settings. Washington, DC: National Association for the Education of Young Children.

Woodhead, M. (1988). When psychology informs public policy: The case of early childhood intervention. American Psychologist, 43(60, 443-454.

Young, K.T. & Marx E. (1992). What does learning mean for infants and toddlers? The contributions of the child, the family and the community. Boston, MA: Center

on Families, Communities, Schools and Children's Learning.